

We claim:

1 1. A probe for use with an outer member having a wall defining an
2 interior bore, the probe comprising:

3 an elongate body, defining a distal region, a distal end and a
4 proximal region, adapted to be carried within the outer member interior bore;

5 an inflatable tissue coagulation body supported on the elongate
6 body distal region; and

7 a control element defining a distal portion associated with the distal
8 end of the elongate body and a proximal portion extending along the exterior of
9 the elongate body toward the proximal region of the elongate body.

1 2. A probe as claimed in claim 1, wherein the elongate body
2 comprises a catheter body.

1 3. A probe as claimed in claim 1, wherein at least the distal region of
2 the elongate body includes a flexible spline.

1 4. A probe as claimed in claim 3, wherein the flexible spline includes a
2 hinge portion.

1 5. A probe as claimed in claim 4, wherein the inflatable tissue
2 coagulation body is proximal to the hinge portion.

1 6. A probe as claimed in claim 4, further comprising:
2 at least one sensing element;
3 wherein the inflatable tissue coagulation body is located one of
4 distal to and proximal to the hinge portion and the at least one sensing element
5 is located the other of distal to and proximal to the hinge portion.

1 7. A probe as claimed in claim 1, wherein the inflatable tissue
2 coagulation body comprises a half-balloon structure.

1 8. A probe as claimed in claim 1, wherein the inflatable tissue
2 coagulation body includes micropores.

1 9. A probe as claimed in claim 1, wherein the inflatable tissue
2 coagulation body comprises a heated structure.

1 10. A probe as claimed in claim 1, wherein the control element
2 comprises a pull wire.

1 11. A probe, comprising:
2 an outer member defining a distal end and including a wall defining
3 an interior bore;
4 an elongate body carried within the outer member interior bore and
5 defining a distal region and a distal end operably connected to the distal end of
6 the outer member; and
7 an inflatable tissue coagulation body supported on the elongate
8 body distal region.

1 12. A probe as claimed in claim 11, wherein the wherein the elongate
2 body comprises a catheter body and the outer member comprises a sheath.

1 13. A probe as claimed in claim 11, wherein at least the distal region of
2 the elongate body includes a flexible spline.

1 14. A probe as claimed in claim 13, wherein the flexible spline includes
2 a hinge portion.

1 15. A probe as claimed in claim 14, wherein the inflatable tissue
2 coagulation body is proximal to the hinge portion.

1 16. A probe as claimed in claim 14, further comprising:
2 at least one sensing element;

3 wherein the inflatable tissue coagulation body is located one of
4 distal to and proximal to the hinge portion and the at least one sensing element
5 is located the other of distal to and proximal to the hinge portion.

1 17. A probe as claimed in claim 11, wherein the inflatable tissue
2 coagulation body comprises a half-balloon structure.

1 18. A probe as claimed in claim 11, wherein the inflatable tissue
2 coagulation body includes micropores.

1 19. A probe as claimed in claim 11, wherein the inflatable tissue
2 coagulation body comprises a heated structure.

1 20. A probe as claimed in claim 11, wherein the outer member defines
2 a distal region and the distal region of the outer member includes a slot.

1 21. A probe for use with an outer member including a wall defining an
2 interior bore, the probe comprising:

3 a tissue coagulation body; and
4 an elongate body, defining a distal region that supports the tissue
5 coagulation body, adapted to be carried within the outer member interior bore
6 and extend outwardly from the interior bore such that the distal region forms a
7 loop, the elongate body including a hinge portion defining the apex of the loop
8 formed by distal region, the hinge portion having a flexibility that allows the apex
9 of the loop to be inserted into a pulmonary vein to such an extent that the tissue
10 coagulation body will be substantially aligned with the pulmonary vein ostium.

1 22. A probe as claimed in claim 21, wherein the elongate body defines
2 a distal end and a proximal region, the probe further comprising:

3 a control element defining a distal portion associated with the distal
4 end of the elongate body and a proximal portion extending along the exterior of
5 the elongate body toward the proximal region of the elongate body.

1 23. A probe as claimed in claim 21, wherein the loop defines a length
2 and a height and the flexibility of the hinge portion is such that the loop length
3 will be at least two times the loop height.

1 24. A probe as claimed in claim 21, wherein the elongate body
2 comprises a catheter body.

1 25. A probe as claimed in claim 21, wherein at least the distal region of
2 the elongate body includes a flexible spline and the hinge portion is formed in the
3 flexible spline.

1 26. A probe as claimed in claim 21, further comprising:
2 at least one sensing element;
3 wherein the tissue coagulation body is located on one side of the
4 hinge portion and the at least one sensing element is located the other side of
5 the hinge portion.

1 27. A probe as claimed in claim 21, wherein the tissue coagulation
2 body comprises an inflatable tissue coagulation body.

1 28. A probe as claimed in claim 27, wherein the inflatable tissue
2 coagulation body comprises a half-balloon structure.

1 29. A probe as claimed in claim 27, wherein the inflatable tissue
2 coagulation body includes micropores.

1 30. A probe as claimed in claim 27, wherein the inflatable tissue
2 coagulation body comprises a heated structure.

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1 31. A method of forming a lesion in tissue associated with a body
2 orifice, comprising the steps of:

3 deploying a probe, including an elongate body having a distal
4 portion and a tissue coagulation body supported on the distal portion, to a
5 region adjacent to the body orifice;

6 forming a loop defining an apex with the distal portion of the
7 elongate body;

8 inserting the apex of the loop into the orifice;

9 contacting a portion of the tissue associated with the orifice with the
10 tissue coagulation body while the loop is located at least partially within the
11 orifice; and

12 forming a lesion in the portion of the tissue associated with the
13 orifice with the tissue coagulation body.

1 32. A method as claimed in claim 31, further comprising the steps of:

2 adjusting at least one of the loop and the tissue coagulation body
3 such that the tissue coagulation body is taken out of contact with the portion of
4 the tissue associated with the orifice;

5 rotating the loop relative to the orifice;

6 contacting a second portion of the tissue associated with the orifice
7 with the tissue coagulation body while the loop is located at least partially within
8 the orifice; and

9 forming a lesion in the second portion of the tissue associated with
10 the orifice with the tissue coagulation body.

1 33. A method as claimed in claim 31, wherein the step of deploying a
2 probe comprises deploying a probe including an inflatable tissue coagulation
3 body and the step of contacting the tissue comprises inflating the tissue
4 coagulation body.

1 34. A method as claimed in claim 31, wherein the step of deploying a
2 probe comprises deploying a probe including a pull wire through an outer member
3 and the step of forming a loop comprises urging the elongate body through the
4 outer member while applying tension to the pull wire.

1 35. A method as claimed in claim 31, wherein the step of contacting a
2 portion of the tissue comprises engaging tissue with respective portions of the
3 loop located on opposite sides of the apex.

1 36. A method as claimed in claim 31, wherein the step of forming a
2 lesion comprises transmitting energy to the tissue.